
ENGINEERING STANDARDS UPDATE

[Standards are serious business](#), but this newsletter isn't.

Topics this month:

- **Training & Qual**
- **LANL Building Code—UMC and UPC 2015 Adoption, NFPA 101-2015**
- **Concrete Anchors for Nuclear Work—Correction and Update**
- **Engineering Processes Changes**
- **LANL Standards Issued in July**
- **DOE Directives and Technical Standards Action**
- **National Standards Action**
- **When Good Conduct of Engineering Isn't Followed**

The LANL Engineering Standards: <http://engstandards.lanl.gov/>

As some of you WSSTfully dream of Frito pies, we interrupt your reverie for these important messages.

TRAINING & QUAL

Once again, goodbye to CoE's long-time training specialist Mike Brazile, retiring after a number of careers—Army Special Forces, corporate, and LANL. Last day Aug 30. After that, and as always, contact his able assistant [Yolanda Trujillo](#) for help with T&Q matters.

Conduct of Engineering is sponsoring three great courses later this month; every one of them is taught infrequently, so be sure to go if you need it:

CGD Overview & Preparers -- Weds, Aug 22 NEW!

Required if you need to do commercial grade dedication for nuclear service per AP-341-703; take one or both courses as needed (and don't call me in the morning).

8-10 a.m. Course 30726, CGD Overview for Managers, CGD Preparers, others. Prereq for 30727. Only 1 spot left!

10:00 a.m.-5:00 p.m. Course 30727, required for CGD preparers, and reviewers (like QPA). Taught at TA-00-0199 Canyon Complex Room 165 by Rick Sarwal (Marshall Bullock is leaving LANL; wish him well soon if he's helped you buy something).

Electrical Standards – Thurs, Aug 23 HELPFUL!!

Four-hour course 17998 covers the electrical engineering standards in Chapter 7 of the LANL Engineering Standards Manual and discusses mandatory requirements and good practices for those involved in electrical design. Strongly suggested for electrical designers, electrical engineers, electrical safety officers, and facility managers. AEs are also encouraged to attend. Taught by Electrical Standards POC Eric Stromberg from 7:30–11:30 am, at White Rock Training Center TA-00-1308 Rm 112.

Standards Intro Course 24140 – Wed, Aug 29 FANTASTIC!!!

Provides familiarity with national and LANL engineering standards for anyone performing, reviewing, or managing design activities. **Required** course for many LANL engineers,

recommended for those at local AE firms. Presented in TA-55-0400 (RLUOB) Room 4503/4, 8 a.m.– 4 p.m., by yours' truly. We'll email the slides to print a few days prior so don't wait until the last day to register.

REGISTERING for UTrain Courses: Go to [UTrain](#). Search on course, assign to yourself, select and enroll. Disenroll if you have to bail. AEs can also register; use CryptoCard or contact Yolanda Trujillo at 665-5696 or yitrujillo@lanl.gov with Z number.

Pressure Safety Officer (PSO) training

Per Ari (Ben) Swartz, POC/CPSO: There are sessions for both the 52955 "Pressure Safety Officer Overview", and 53900 "ASME B31.3 Process Piping". Classes are scheduled at the Canyon Complex, TA00-0199 room 172, from 8 am to 5 pm.

The 52955 "**Pressure Safety Officer Overview**" class is **8/7**. If your certification is for PSO Duty Area A, Curriculum #11957, you only need this class.

The 53900 "**ASME B31.3 Process Piping**" class is **8/21**. If your certification is for PSO Duty Area B, Curriculum #11958, you will need to attend both classes.

You may review the Pressure Safety Officer Qualification Standard, ESD-QS-001,R0 [here](#). Please determine which class(es) you need, and select the date that is most suited to your schedule. Send Ben your request and he will place you into the class using an Outlook meeting notice. He will try to accommodate your requests as best as possible, but first come first served so please get your requests in early. Once a class fills up he will automatically schedule a request for a class that has room remaining. You will receive a meeting notice for a class to confirm that you have been scheduled. **If you do not receive a meeting notice you have not been scheduled!**

LANL BUILDING CODE—UMC AND UPC 2015 ADOPTION, NFPA 101-2015

As predicted last month, LANL has moved from the 2012 to the 2015 editions of the IAPMO Uniform Mechanical, Plumbing, and Solar Energy Codes through revision of ESM Chapter 16 IBC Program Section IBC-GEN Attachment A, LANL Building Code. Concurrently, the LANL Research Library's [IHS standards subscription](#) for Labbies has been changed to offer the 2015s (example search: "IAPMO UMC" —but be sure to uncheck the default "Most Recent Revision" filter button since we don't subscribe to the 2018s. Again, since these are mechanical codes, please direct technical questions to Mech POC Michael Ladach, and general-confusion questions to me.

Also, changed in previous (April) revision and missed by some was a realignment of the adopted NFPA 101 edition to sync with what the IBC/IFC-2015 invoke (i.e., the 2015).

CONCRETE ANCHORS FOR NUCLEAR WORK—CORRECTION AND UPDATE

Last month I wrote that LANL Building Official Larry Goen issued memos that provide a technical justification to begin the use of Hilti HDA undercut, post-installed concrete anchors in

nuclear service, and to discontinue future purchases of Drillo Maxi-Bolts for same purpose. The latter was not quite right; projects that have completed design for Drillco anchors may continue to use them if on hand—or buy them to use in that project. ES-55 has a CGD TEA plan for such purposes.

Also, revision of the LANL standards necessary for installation of the HDAs is nearly complete (in comment backcheck phase), with issuance now anticipated for August. Coupled with this, Santino Hinojos in MOF-CM-SE is arranging for installation training by a Hilti Field Engineer. It will be classroom for about 1 hour, and then a 1-hour, hands-on session. Santino will be scheduling with the relevant inspectors and craft management, then take interested design engineers and others space-permitting. Any sessions beyond August may be noted in the September Update. shinojos@lanl.gov, 606-0580.

ENGINEERING PROCESSES CHANGES

None. Job ad IRC65860 is still open and accepting resumes—a good opportunity to improve things around here.

LANL STANDARDS ISSUED IN JULY

| ESM STD-342-100 | |
|--|--|
| Chapter 16 IBC Program, Section IBC-GEN, Att. A : LANL Building Code (LBC) | Minor updates following NM adoption of 2015 UPC and UMC. |
| Chapter 21 Software, Section V&V | Added a link to new Form 3055 - Software Test Plan under references. Thanks to Paula Diepolder. |
| Master Specifications STD-342-200 | |
| 09 2116R5 Gypsum Board Systems | Minor change to gage thickness of metal studs. Thanks to POC Scott Richardson. |
| 28 4600R1 Fire Detection and Alarm | Ethernet dialer cable routing added at 3.5.G. Thanks to Walter Martinez. |
| Std Drawings & Details STD-342-400 | |
| Structural | |
| Ch. 5- Z1052-2 R2 Foundation Support System for Temporary Trailers-double wide | Moved tabular data to new drawing ST-Z1052-4. Updated detail to meet LANL ESM Ch. 5 sect. II rev.10. Addressed trailer marriage line support. Thanks to Ben Winter, POC Glen Pappas. |
| Ch. 5- Z1052-4 R0 Tie-down Quantities Considering Topographic Factor | Initial issue. |
| Mechanical | |
| Ch. 6-D30GEN-1 Sheet 1 Rev. 4 Open Cooling Tower Water Treatment Flow Diagram | Updated based on LANL Master Spec 23 2500. Thanks to POC Michael Ladach. |

DOE DIRECTIVES AND TECHNICAL STANDARDS ACTION

STDs [postings](#) in the past month: DOE-HDBK-1224-2018, Hazard and Accident Analysis Handbook

Not a STD, but an order: **DOE O 420.1C Chg2** was issued 7/26/18. It is not in our contract (so don't follow it), but we'll likely assess its impact and create an implementation plan before that contract mod is made. CoE will need to update a number of documents to reference and/or implement Chg2, newer DOE-STDs such as 1020 (NPH) and 1073 (CM), and some applicable national standards. Fire Protection, Safety Basis, and Criticality Safety may have impacts as well. Job security!

NATIONAL STANDARDS ACTION

LANL's [IHS](#) subscription reports these changes. Section Z10 says "Errata (correct errors) to any document...are mandatory regardless of contract award date or code of record," so errata apply.

Document number: NFPA 14 ERTA 2
Publication Date: 7/20/2018 [LANL still uses IBC-referenced 2013]
Title: Standard for Installation of Standpipe and Hose Systems
Type of Change: Errata/Erratum

Document number: NFPA 20 ERTA 1
Publication Date: 5/8/2018 [LANL still uses IBC-referenced 2013]
Title: Standard for the Installation of Stationary Pumps for Fire Protection
Type of Change: Errata/Erratum

Document number: IEEE NESCIR584
Publication Date: 6/8/2018
Title: National Electrical Safety Code
Type of Change: Interpretation

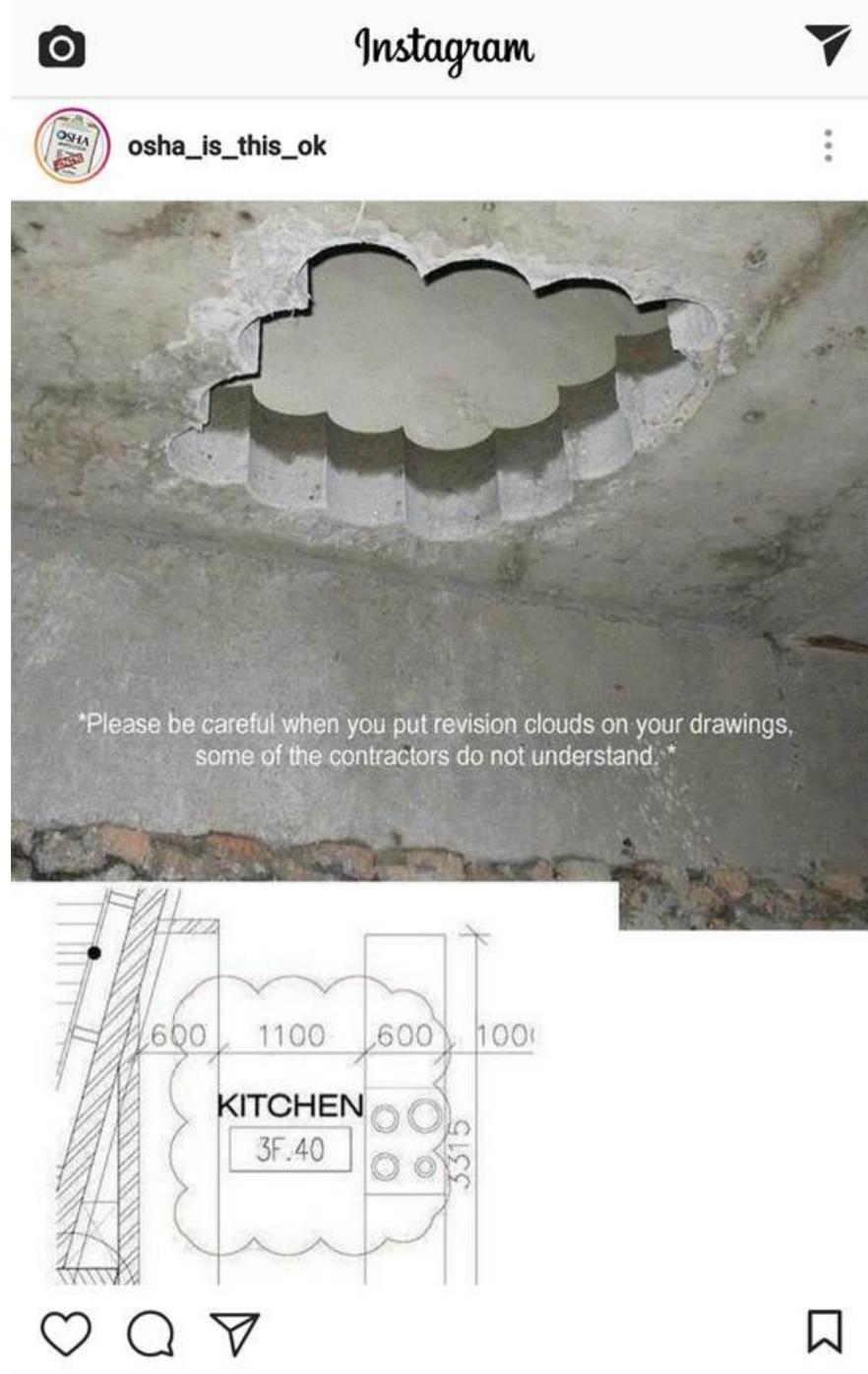
Document number: TIA-569-D-2
Publication Date: 7/20/2018
Title: Telecommunications Pathways and Spaces: Addendum 2- Additional Pathway and Space Considerations for Supporting Remote Powering Over Balanced Twisted-Pair Cabling
Type of Change: Complete Revision

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

This was sent out by Robert Swatek with the message, "This is an issue that was received by OSHA at their OSHA is this OK site. It just reinforces the fact that as we work with our subcontractors and fabricators we must be vigilant to ensure we clearly communicate our expectations and that we remove to the extent possible any confusion with what we are communicating. As you can see from the below picture this did not happen in this case and the

final result is not what the engineer thought he would receive. I have to thank my son, a journeyman electrician who sent this to me.”

Thanks to Jeff Tucker for forwarding; I can always use material for this Update.



I understand this isn't a CoE failing per se, except perhaps mine for recycling a years-old meme.

LAST MONTH'S UPDATE TOPICS

Miss an issue? The archive is at "[Monthly Update](#)" on the [Standards homepage](#). Last month's topics:

- **Concrete Anchors for Nuclear Work—Hilti**
- **UMC and UPC 2015 Adoption**
- **Training & Qual**
- **Nuclear Clause Not Required for Procurements Undergoing CGD**
- **Engineering Processes Changes**
- **LANL Standards Issued in June**
- **PM Procedure Changes**
- **DOE Technical Standards Action**
- **National Standards Action**
- **When Good Conduct of Engineering Isn't Followed**

The views expressed in this email are not necessarily those of my employer.
To request a change to this newsletter's distribution, please contact me.

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